

Patent claims

1. Method for the treatment of contaminated materials, particularly infected materials, in which said materials are fed by means of an input unit (2, 3, 4) to a conveyor system (9) extending into a treatment chamber (6) where they are heated, treated, and discharged via a discharge element (12), characterized in that, a first treatment zone for moistening the infected material is made in which a liquid reservoir (16) is produced in a first region of the treatment chamber (6) with the liquid present in the infected material and/or the external addition of water by slanting essentially the entire treatment chamber (6) upwards in the direction of transport and the liquid reservoir is heated to a temperature lower than the boiling point of water, whereby the first region lies adjacent the lower end of the treatment chamber,
and a second treatment zone for disinfection and/or sterilization is made by heating a second region which extends from the first region to the higher end of the treatment chamber (6) at least partially to a temperature above the boiling point of water and by building up the steam pressure necessary for disinfection and/or sterilization in the second region.
2. Method according to claim 1, characterized in that the second region is subdivided into sections with varying temperatures.
3. Method according to claim 2, characterized in that in the second region, the desired steam pressure is generated by the evaporation of the inherent moisture of the material to be treated and/or by the supply of water in liquid form and/or steam.
4. Method according to one of the preceding claims, characterized in that the level of the liquid reservoir (16) is regulated by an overflow (15).
5. Method according to claim 4, characterized in that liquid from the overflow (15) is fed back into the liquid reservoir (16).

6. Method according to one of the preceding claims, characterized in that the material to be treated is supplied in portions which are in the treatment chamber (6) at the same time, whereby supply and removal occurs via slide valves or locks of the input unit (2, 3, 4) and the discharge element (12).
7. Method according to one of the preceding claims, characterized in that the conveyor system has a screw conveyor (9).
8. Device for the treatment of contaminated materials, particularly infected materials, in which said materials are fed by means of an input unit (2, 3, 4) to a conveyor system (9) extending into a treatment chamber (6) where they are heated, treated, and discharged via an discharge element (12), wherein essentially the entire treatment chamber (6) is slanted upward in the direction of transport, and the treatment chamber (6) has a first heating zone which lies adjacent the lower end of the treatment chamber and a second heating zone which extends between the first heating zone and the higher end of the treatment chamber (6) and which is designed to generate a temperature for building up the steam pressure required for disinfection and/or sterilization, characterized in that the first heating zone is equipped with means (23, fluid reservoir 16) for moistening the introduced material with fluid and is designed to generate a temperature below the boiling point of water, and the second heating zone is designed to generate a temperature above the boiling point of water.
9. Device according to claim 8, characterized in that the second heating zone is subdivided into further heating sections for generation of further temperatures.
10. Device according to claim 8 or 9, characterized in that the second heating zone has means (23) for the introduction of steam.
11. Device according to claims 8 to 10, characterized in that the first heating zone has means (23) for the addition of liquid water.

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12. Device according to one of the claims 8 to 11, characterized in that the treatment chamber (6) has an overflow (15) for regulation of a liquid reservoir (16).

13. Device according to claim 12, characterized in that the overflow (15) discharges into a collection vessel (18) which is connected via a return line (19) with the treatment chamber (6).
14. Device according to claim 13, characterized in that the overflow (15), collection vessel (18), and return line (19) are designed so that they are at same pressure as the treatment chamber (6).
15. Device according to one of the claims 8 to 14, characterized in that the inner wall of the treatment chamber (6) is provided with heating means.
16. Device according to one of the claims 8 to 15, characterized in that the conveyor system (9) is provided with heating means.
17. Device according to one of the claims 8 to 16, characterized in that microwave energy can be definably conducted into the treatment chamber (6) and/or the conveyor system (9).
18. Device according to one of the claims 8 to 17, characterized in that the conveyor system has a screw conveyor (9).
19. Device according to claim 18, characterized in that the screw conveyor (9) only has a bearing on one end and rests on slide runners.
20. Device according to one of the claims 8 to 19, characterized in that a shredder (3) is located in the input unit.
21. Device according to one of the claims 8 to 20, characterized in that the input unit (2, 3, 4) and the discharge element (12) can be closed off by means of slide valves (7, 14) and/or locks.
22. An installation having several devices according to one of the claims 8 to 21 and a shredder unit, whereby the devices are positioned in parallel so that they can be supplied simultaneously and/or sequentially by the shredder unit.

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